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Patent

Attorney's Docket No. 027650-945

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
)
Norio KOBAYASHI et al.) Group Art Unit: Unassigned
)
Application No.: Unassigned) Examiner: Unassigned
(Corresponds to International Application No.)
PCT/JP00/09029))
)
Filed: August 21, 2001)
)
For: METHOD FOR PREPARING)
LAMINATE FOR PACKAGING)
MATERIAL AND LAMINATE FOR)
PACKAGING MATERIAL)

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-captioned patent application, kindly amend the application as follows:

IN THE SPECIFICATION:

Page 4, delete line 11, and insert the following therefor:

--Detailed Description of the Invention--.

Page 6, line 20, delete "Best Mode for Carrying Out the Invention."

IN THE CLAIMS:

Kindly replace Claims 1-6 as follows.

1. (Amended) A method of manufacturing a packaging material laminate of web form comprising at least a printing ink outer layer, an aluminum vapor deposition film layer containing linear low density polyethylene obtained by a polymerization using metallocene catalyst, a polyethylene-extrusion lamination layer, and a carrier layer of paper or paper substitution material, according to following steps:

a step of vapor-depositing aluminum on one side of the web form film containing the linear low density polyethylene obtained by the polymerization using the metallocene catalyst,

a step of winding up temporarily the aluminum vapor deposition film containing the linear low density polyethylene obtained by the polymerization using the metallocene catalyst in a reel form, making direct contact between the aluminum vapor deposition surface and the film surface containing the linear low density polyethylene, and keeping the reel for a predetermined time,

a step of unwinding the aluminum vapor deposition film from the kept reel, applying a fused lamination resin by extrusion lamination by fused polyethylene between the vapor deposition surface of an aluminum vapor deposition film layer and the surface

of the carrier layer, and laminating the aluminum vapor deposition film layer and the carrier layer and,

a step of forming an ink layer in the external surface of the outside of the laminate by printing simultaneously, before and after the above-mentioned steps.

2. (Amended) The method of manufacturing the packaging material laminate according to claim 1 wherein the carrier layer is laminated, without coating anchor-coat material in the carrier layer just before the step of laminating the aluminum vapor deposition film layer and the carrier layer.

3. (Amended) A laminate for packaging material containing a printing ink layer, a first aluminum vapor deposition polyethylene layer obtained by vapor depositing aluminum to linear low density polyethylene obtained by a polymerization using metallocene catalyst, a carrier layer of paper or paper substitution material, and a second aluminum vapor deposition polyethylene layer obtained by vapor depositing aluminum in linear low density polyethylene obtained by a polymerization using metallocene catalyst, and being constituted in order of the laminating,

wherein

said printing ink layer is laminated to the polyethylene layer side of said first aluminum vapor deposition polyethylene layer,

said carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the aluminum vapor deposition layer side of the first aluminum vapor deposition polyethylene layer, and

said carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the aluminum vapor deposition layer side of the second aluminum vapor deposition polyethylene layer.

4. (Amended) A laminate for packaging material containing a printing ink layer, an aluminum vapor deposition polyethylene layer obtained by aluminum vapor deposit to linear low density polyethylene obtained by a polymerization using metallocene catalyst, a carrier layer of paper or paper substitution material, and a polyolefin inner layer and, being constituted in order of the lamination, wherein

the printing ink layer is laminated to the polyethylene layer side of the aluminum vapor deposition polyethylene layer,

the carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the aluminum vapor deposition layer side of the aluminum vapor deposition polyethylene layer.

5. (Amended) A laminate for packaging material which comprises a printing ink layer, a polyolefin outer layer, a carrier layer of paper or paper substitution material, and an aluminum vapor deposition polyethylene layer obtained by aluminum vapor deposit to linear low density polyethylene obtained by polymerization using metallocene catalyst, and is constituted in order of the lamination, wherein

said carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the aluminum vapor deposition layer side of the aluminum vapor deposition polyethylene layer.

6. (Amended) Laminate for packaging material of Claim 3, wherein any anchor-coat material is not coated on the carrier layer surface in the lamination structure between the aluminum vapor deposition film layer and the carrier layer.

Kindly enter the following new claims.

-- 7. (New) Laminate for packaging material of Claim 4, wherein any anchor-coat material is not coated on the carrier layer surface in the lamination structure between the aluminum vapor deposition film layer and the carrier layer.

8. (New) Laminate for packaging material of Claim 5, wherein any anchor-coat material is not coated on the carrier layer surface in the lamination structure between the aluminum vapor deposition film layer and the carrier layer. --

IN THE ABSTRACT OF THE DISCLOSURE:

Kindly insert the Abstract of the Disclosure as set forth below and on a separate sheet.

A packaging material laminate includes at least a printing ink outer layer, an aluminum vapor deposition film layer containing linear low density polyethylene obtained by a polymerization using metallocene catalyst, a polyethylene-extrusion lamination layer, and a carrier layer of paper or paper substitution material. The method of manufacturing includes the steps of vapor-depositing aluminum on one side of the web film containing linear low density polyethylene obtained by the polymerization using metallocene catalyst, winding up the aluminum vapor deposition film temporarily in a reel form, making direct contact between the aluminum vapor deposition surface and the film surface containing a linear low density polyethylene, keeping the reel in predetermined time, unwinding the aluminum vapor deposition film from the kept reel, applying a fused lamination resin by the extrusion lamination by fused polyethylene, between the vapor deposition surface of the aluminum vapor deposition film layer and the surface of the barrier layer, laminating the aluminum vapor deposition film layer and the carrier layer, forming an ink layer in the appearance surface of the outside of the laminate by printing.


REMARKS

Early and favorable consideration with respect to this application is respectfully requested.

Should any questions arise in connection with this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date: August 21, 2001

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Marked-up Claims 1-6.

1. (Amended) A method of manufacturing a packaging material laminate of web form [which comprises] comprising at least a printing ink outer layer, an aluminum vapor deposition film layer containing linear low density polyethylene obtained by a polymerization using metallocene catalyst, a polyethylene-extrusion lamination layer, and a carrier layer of paper or paper substitution material, according to following steps[;]:

a step of vapor-depositing aluminum on one side of the web form film containing the linear low density polyethylene obtained by the polymerization using the metallocene catalyst,

a step of winding up temporarily the [aluminium] aluminum vapor deposition film containing the linear low density polyethylene obtained by the polymerization using the metallocene catalyst in a reel form, making direct contact between the [aluminium] aluminum vapor deposition surface and the film surface containing the linear low density polyethylene, and keeping the reel [in] for a predetermined time,

a step of unwinding the [aluminium] aluminum vapor deposition film from the kept reel, applying a fused lamination resin by extrusion lamination by fused polyethylene between the vapor deposition surface of an [aluminium] aluminum vapor deposition film

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Marked-up Claims 1-6.

layer and the surface of the carrier layer, and laminating the [aluminium] aluminum vapor deposition film layer and the carrier layer and,

a step of forming an ink layer in the external surface of the outside of the laminate by printing simultaneously, before and after the above-mentioned steps.

2. (Amended) The method of manufacturing [of] the packaging material laminate according to claim 1 wherein the carrier layer is laminated, without coating anchor-coat material in the carrier layer just before the step of laminating the [aluminium] aluminum vapor deposition film layer and the carrier layer.

3. (Amended) A laminate for packaging material containing a printing ink layer, [the 1st aluminium] a first aluminum vapor deposition polyethylene layer obtained by vapor depositing [aluminium] aluminum to linear low density polyethylene obtained by a polymerization using metallocene catalyst, a carrier layer of paper or paper substitution material, and [the 2nd aluminium] a second aluminum vapor deposition polyethylene layer obtained by vapor depositing [aluminium] aluminum in linear low

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Marked-up Claims 1-6.

density polyethylene obtained by a polymerization using metallocene catalyst, and being constituted in order of the laminating,

[characterized by that] wherein

[the] said printing ink layer is laminated to the polyethylene layer side of [the 1st aluminium] said first aluminum vapor deposition polyethylene layer,

[the] said carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the [aluminium] aluminum vapor deposition layer side of [the 1st aluminium] the first aluminum vapor deposition polyethylene layer, and

[the] said carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the [aluminium] aluminum vapor deposition layer side of [the 2nd aluminium] the second aluminum vapor deposition polyethylene layer.

4. (Amended) A laminate for packaging material containing a printing ink layer, an [aluminium] aluminum vapor deposition polyethylene layer obtained by [aluminium] aluminum vapor deposit to linear low density polyethylene obtained by a

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Marked-up Claims 1-6.

polymerization using metallocene catalyst, a carrier layer of paper or paper substitution material, and a polyolefin inner layer and, being constituted in order of the lamination, [characterized in that] wherein

the printing ink layer is laminated to the polyethylene layer side of the [aluminium] aluminum vapor deposition polyethylene layer,

the carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the [aluminium] aluminum vapor deposition layer side of the [aluminium] aluminum vapor deposition polyethylene layer.

5. (Amended) A laminate for packaging material which comprises a printing ink layer, a polyolefin outer layer, a carrier layer of paper or paper substitution material, and an [aluminium] aluminum vapor deposition polyethylene layer obtained by [aluminium] aluminum vapor deposit to linear low density polyethylene obtained by polymerization using metallocene catalyst, and is constituted in order of the lamination, [characterized by that] wherein

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Marked-up Claims 1-6.

[the] said carrier layer of paper or paper substitution material is laminated through a polyethylene-extrusion lamination layer to the [aluminium] aluminum vapor deposition layer side of the [aluminium] aluminum vapor deposition polyethylene layer.

6. (Amended) Laminate for packaging material of [any claim of Claims 3-5] Claim 3, wherein any anchor-coat material is not coated on the carrier layer surface in the lamination structure between the [aluminium] aluminum vapor deposition film layer and the carrier layer.

ABSTRACT OF THE DISCLOSURE

A packaging material laminate [comprises] includes at least a printing ink outer layer, an aluminum vapor deposition film layer containing linear low density polyethylene obtained by a polymerization using metallocene catalyst, a polyethylene-extrusion lamination layer, and a carrier layer of paper or paper substitution material. The method of manufacturing [comprises] includes the steps of vapor-depositing aluminum on one side of the web film containing linear low density polyethylene obtained by the polymerization using metallocene catalyst, winding up the aluminum vapor deposition film temporarily in a reel form, making direct contact between the aluminum vapor deposition surface and the film surface containing a linear low density polyethylene, keeping the reel in predetermined time, unwinding the aluminum vapor deposition film from the kept reel, applying a fused lamination resin by the extrusion lamination by fused polyethylene, between the vapor deposition surface of the aluminum vapor deposition film layer and the surface of the barrier layer, laminating the aluminum vapor deposition film layer and the carrier layer, forming an ink layer in the appearance surface of the outside of the laminate by printing.

ABSTRACT OF THE DISCLOSURE

A packaging material laminate includes at least a printing ink outer layer, an aluminum vapor deposition film layer containing linear low density polyethylene obtained by a polymerization using metallocene catalyst, a polyethylene-extrusion lamination layer, and a carrier layer of paper or paper substitution material. The method of manufacturing includes the steps of vapor-depositing aluminum on one side of the web film containing linear low density polyethylene obtained by the polymerization using metallocene catalyst, winding up the aluminum vapor deposition film temporarily in a reel form, making direct contact between the aluminum vapor deposition surface and the film surface containing a linear low density polyethylene, keeping the reel in predetermined time, unwinding the aluminum vapor deposition film from the kept reel, applying a fused lamination resin by the extrusion lamination by fused polyethylene, between the vapor deposition surface of the aluminum vapor deposition film layer and the surface of the barrier layer, laminating the aluminum vapor deposition film layer and the carrier layer, forming an ink layer in the appearance surface of the outside of the laminate by printing.

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